

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A cleaning apparatus of a high density plasma chemical vapor deposition chamber, comprising:

a chamber formed with a closed space therein, said chamber including a vertical sidewall;

an upper electrode provided in an upper portion of the chamber and applied with radio frequency energy;

a lower electrode provided below the upper electrode and applied with radio frequency energy;

a chuck provided below the upper electrode and formed thereon with the lower electrode to fix a wafer thereon; and

a plurality of process gas nozzles provided at regular intervals on said vertical sidewall of said chamber for supplying a process gas; and

at least three cleaning gas nozzles provided below the plurality of process gas nozzles at regular intervals on said vertical sidewall of the chamber around the chuck adapted to spray a cleaning gas uniformly in all directions in the chamber, said cleaning gas nozzles extending perpendicularly from said vertical sidewall.

2. (Original) The apparatus of claim 1, wherein at least one cleaning gas nozzle is bent toward an upper center of the chamber relative to an upper surface of the chuck.

3. (Original) The apparatus as claimed in claim 2, wherein each cleaning gas nozzle is bent toward an upper center of the chamber relative to an upper surface of the chuck.

4. (Original) The apparatus as claimed in claim 1, wherein at least one cleaning gas nozzle is bent in a spiral form toward a center portion of the chamber and in a direction from a lower portion to an upper portion relative to an upper surface of the chuck.

5. (Original) The apparatus as claimed in claim 1, wherein the cleaning gas is NF_3 .

Claims 6-13. (Canceled)